

SPECTROSCOPIC CASE-BASED STUDIES IN A FLIPPED QUANTUM MECHANICS COURSE

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Students in a flipped Quantum Mechanics course were expected to apply their knowledge of spectroscopy to a variety of case studies involving complex mixtures of chemicals. They used simulated data, prepared in advance by the instructor, to determine the major chemical constituents of complex mixtures. Students were required to request the appropriate data in order to ultimately make plausible guesses about the composition of the mixtures, allowing them ownership over the discovery process. This talk will describe how these activities worked in practice, give caveats for instructors who wish to adopt them in the future, and discuss how the results of these exercises can be used for both formative and summative assessment.